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ABSTRACT

A framework for health education based on experiential learning and critical inquiry was developed and applied to a Spring 1990 basic health education class for college students called "Patterns of Healthful Living." Students were asked to consider contemporary health problems and how these affected their own lives and the lives of others. The learning styles of the 69 participants, freshmen through seniors, were measured using the Learning Style Inventory (LSI). Students discussed their own learning styles and the experiential learning model before dividing into groups to explore topics of particular interest. Each group then prepared and provided a presentation on the topic. The instructor expanded on the presentations and provided feedback. The students were distributed among four learning styles as follows: (1) 21 assimilators; (2) 14 convergers; (3) 16 divergers; and (4) 18 accommodators. They appreciated knowing their learning styles, responded well to group work, accepted the challenges involved, and showed interest in the learning styles of others. The results show that students actually do possess different learning styles, and when teachers are aware of these differences, they can create various types of classroom environments that cater to these preferred styles of learning. A 10-item list of references is included. An attachment contains the LSI and two interpretive figures. (SLD)

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INTEGRATING EXPERIENTIAL LEARNING AND CRITICAL INQUIRY IN HEALTH EDUCATION: A FRAMEWORK FOR HEALTH PROFESSIONALS

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INTEGRATING EXPERIENTIAL LEARNING AND CRITICAL INQUIRY IN HEALTH EDUCATION: A FRAMEWORK FOR HEALTH PROFESSIONALS

From the moment we step foot in school and everyday since then, we have been predestined to meet the challenges of new experiences, new knowledge, new thoughts and ideas. We grow, we develop, we change -- sometimes, so rapidly that we fall short of creating for ourselves the real meaning of our learning. This paper does not totally aspire to search for that meaning, for in a general sense, the true meaning is deep-seated within each individual. However, a reflection on past and present experiences will enable the development of a curriculum that is rich not only in knowledge but also in the very essence for which learning stands. The thesis of this paper will be made in the context of health education whereby a framework for health professionals and students based on experiential learning and critical inquiry is considered. It is hoped that within the realm of health education, practice and research, all those who become involved, in one way or another, will form a basis for looking at past, present and future changes in the field and how best to approach them.

PURPOSE:

The purpose of this project is to integrate the experiential learning and critical inquiry framework in a basic health education course targeted for students with various university majors and year levels. As postulated by the experiential

learning theory, teachers and students possess various learning styles - or preferred styles of learning. It is speculated that when teachers are aware of their own and their students' specific learning styles, teachers can create learning environments that match their own and their students' learning styles. In turn, when the learning environments are those with which the students feel comfortable, their opportunities for individual growth and development are enhanced as they freely explore numerous educational possibilities, most especially those which may encourage the likelihood of success in school. According to Fizzell, a student who might fail on one program can succeed in another which has the same goals and standards, but serves different learning styles. A student's decision to stay or not to stay in school is influenced by numerous factors, one of which is the likelihood of success or the fear of failure in the accomplishment of certain goals and dreams. When stimulated to freely explore various learning opportunities where they can excel, students' self-esteem increase and their motivation to further their education also follows. Further, in examining one's individual unique characteristics relative to learning, the incentive to succeed is superceded by the concern for failure. Thus, an educational environment which fosters perception of a higher probability of sucess will, therefore, foster student retention.

LITERATURE REVIEW:

There are several definitions to health education, each with a purpose of meeting specific goals and demands. One definition set forth by the World Health Organization's (WHO) Expert Committee on Planning and Evaluation of Health Education Services is accepted throughout the world:

> "The focus of health education is on people and on action. In general, its aims are to encourage people to adopt and sustain healthful life patterns, to use judiciously and wisely the health services available to them, and to make their own decisions, both individually and collectively, to improve their health status and environment."

This definition has been expanded and redefined through the years as goals and other objectives change. In a real sense, however, this definition, though widely accepted, has been a target of constant deliberation, for its generality contradicts the fragmented and often conflicting performance of health pro fessionals. For instance, the phrase "...to make their own decisions" is inconsistent with the goal of patient education which is " to comply with and obey health orders ..." The latter goal conjures that health practitioners have areas of specialization which are grounded on scientific theories and principles. They are thereby authorized to prescribe and determine what is best for an individual. However, this assumption predisposes the individual to decision-making limitations as these prescriptions have been dictated on by others and are blindly accepted and met regardless of the overall

situation.

It is commonplace that health practitioners consider generality in evaluating behavioral outcomes - what may have been beneficial for one will function similarly for another. This notion fails to treat individuals as having characteristics which are uniquely their own - what may have been suitable for one may not necessarily apply to the other. Traditional health education has also been generally aimed st the achievement of behavioral outcomes. If an answer to a question was correct, learning has taken place. If there was an observed change in behavior, the goal was accomplished. The mechanism in which this answer or behavior was reached remains insignificant. In health education, it is imperative to be cognizant of these unique attributes. More important, is that individuals utilize and cultivate these specific qualities in the process of decision-making and the performance of valuable tasks. In addition, health educators must encourage learners to think and reflect back at their past actions and decisions. With reflection, the experience is made more meaningful.

The experiential learning and critical inquiry framework grounded in reflection is useful in the creation of individualized learning experiences. The goal of critical inquiry and experiential learning lies in the reflection of the learning processes through which the outcomes are accomplished. It is in this context that this framework will be developed.

The Framework:

David Kolb (1984) drew his theory of experiential learning from the origins of Dewey, Lewin and Piaget. The experiential learning model pursues a framework for examining and strengthening the links among education, work and personal development. The process of experiential learning is viewed as a four-stage cycle which includes experience, observation, conceptualization and experimentation. In the first stage, the learner becomes actively involved in the testing, exploration and accommodation of the problem. In the second stage, the learner struggles to maintain this involvement yet becomes a reflective observer as well, investigating the problem from different perspectives and in every aspect to understand its wholeness. A complete image is, thus, produced that can eventually be reduced to its subcomponents. In the third stage, the learner tries to analyze the problem using inductive reasoning, and then reformulates it to become a more personal, more meaningful concept or theory. In the fourth stage the learner employs deductive reasoning to test the theory or concept and then develops a method of actions upon which the problem can be resolved. After all four stages have been explored, the learner then returns to the first stage, this time with a specific hypothesis to be tested in a new experience.

The learning process depicted in this model necessitates the resolution of dynamic tensions between concrete experience and abstract conceptualization on one pole and between active

experimentation and reflective observation on the other. It is suggested that each of these four learning modes will emerge as more powerful and adaptive forms when these strategies are used in combination. The combination of all four modes produces the highest level of learning. Because of the instability of these bipolar tensions, however, individuals do not develop ideally at all four stages; instead, individual learning styles emerge which may become dominant in some areas and weak in others.

These individual learning styles are influenced by heredity, past life experiences and the demands of present environments. Through the individual's interaction with the world, conflicts between being active and reflective, immediate and analytical are somehow resolved. Individualized learning styles are distinguished as divergers, convergers, assimilators and accommodators. Divergers are concrete and reflective and learn through inductive reasoning. Convergers are active and abstract and learn through inductive reasoning. Assimilators are abstract and reflective and learn inductively. Accommodators are active and concrete and learn enactively. These learning styles are adaptive states that promote stability through consistent patterns of transaction with the world.

In Kolb's model, learning is seen as a continuous process. The situations in which learning takes place are influenced by the a) individual's particular learning style, which, according to Kolb (1984, p. 98) are "shaped by the structure of social knowledge and through individual creative acts: knowledge is

formed by individuals;" and b) the environment that is responsive to him/her. An environment is responsive to the learners if it: 1) permits them to explore freely and provides opportunities for discovery; 2) renders appropriate feedback about the consequences of their actions; 3) allows them to learn at a rate that is comfortable for them; 4) permits them to make full use of their capacity for exploration and discovery of various kinds of relations; and 5) is structured so that they are likely to make interconnections and relationships about the physical, cultural and social worlds.

Kolb hypothesizes that if individual learning is the main core of most professions, the cultural variations among fields of inquiry and endeavor should be organized in such a way that it matches the learning process and the structure of knowledge. Social knowledge is valuable in continuously helping people make their choices of experiences and exploring personal fields of time and space; thus, learning becomes a process where development occurs.

The challenge of life-long learning is a challenge of integrative development. As people mature, accentuation forces play a smaller role. Kolb stresses that specialization takes place as an prominent order of learning, but precedes integration, which is likely to happen with increased formal education.

Experiential learning in relation to health:

The experiential learning model provides a framework which helps health educators understand the various ways through which individuals learn, develop and acquire knowledge that is not only cognitively retained but also behaviorally apparent. The role of the health educator is to guide the individual in reaching a solution to a problem. Using the experiential learning and critical inquiry framework, the health educator does not solve the problem for the individual; instead, s/he acts as a facilitator in the exploration of alternative ways to solve the problem. As facilitator, the health educator poses questions, provides options, presents all possible information needed so that the individual can look at the problem from different perspectives.

As stated previously, it is not inconceivable that health educators (and other professionals as well) often function on the basis of specialized scientific knowledge. This concept is designated by Schon (1983) as the model of Technical Rationality -- a professional activity which consists in "instrumental problem solving made rigorous by the application of scientific theory and technique" (p. 21). The ultimate goal is the achievement of an <u>end</u>. Advocates of the science-based profession have routinely followed the model of technical rationality because to them, the concept of "general principles" is viewed as the highest level in the hierarchy of "application." Through the application of general principles, the intended outcomes are

often achieved. But little importance is given to the significance of the problem -- the essence through which the individual experiences the problem in its wholeness, the ways in which the individual attains his knowledge, and the application of this knowledge in more explicable, more explorable, perhaps, more adventuresome, ways.

Health educators are often impeded by the limitations imposed by scientific knowledge. With certain degrees of expertise, they concoct upon themselves the responsibility for making decisions for others. Unless a person is disabled or does not possess the strength and ability to participate in clear judgment, it is vital to help individuals make decisions for themselves. It is the health educator's goal to facilitate arrival at decisions which have been the most meaningful. Failure to do this will foster dependence and hinder growth.

Reflection:

Schon suggests that health educators must not only be concerned with "learning what to do;" but also, "thinking about what we are doing". This is the process called reflection in action. It requires constant deliberation about activities, performances, and in a sense, evolving one's own way of doing it. Much reflection on action occurs not from the experience of intended consequences but from the experience of surprise. As Schon (1986, p. 56) states,

"When intuitive, spontaneous performance yields nothing more than the results expected for it, then we tend not to think about it. But when intuitive performance leads to surprise, pleasing and promising or unwanted, we may respond by reflecting-in-action."

More often than not, we as health educators involve ourselves too much in the practice of our practice. We develop for ourselves a repertoire of expectations, techniques and images that we find ourselves selectively becoming inattentive to phenomena that do not fit in this repertoire. This is not only true with health educators but other people in the health professions as well. Physicians are good examples. With a degree of specialization, the concept of looking at a patient as a "whole person" is lost in the isolation of this patient in his/her illness, separate from the rest of his/her experience. Sanford (1981) elucidated that health practitioners no longer deal with the whole person but focus more and more non-part functions without bothering to connect them with the central structures in the person. Thus, if errors remain uncorrected, there persists only one other way to remedy the error and that is, to refer the patient to another specialist who may know more about the area of uncorrected error. In the repetitive practice of this narrowed routine, the physician may find himself "bored" or "burned out" because s/he has "overlearned" what s/he already knows. With reflection, however, a more positive impact can occur.

According to Schon (1983), a practitioner's reflection can serve as a corrective to overlearning. He contends that through reflection, the practitioner "can surface and criticize the tacit understandings that have grown up around repetitive experiences of a specialized practice, and can make new sense of the situations of uncertainty or uniqueness which s/he may allow him/herself to experience" (p. 61). When a health educator thinks back on the outcomes of an instructional situation s/he accomplished earlier - the process of knowing in action combined with reflection becomes a totally new experience where reflection in practice takes place.

How, then, can the health educator approach a situation where the role of a guidance or facilitator can be met successfully in the total development of an individual?

Critical inquiry:

To do this, the health professional must be well versed in the field of critical inquiry. Collins and Stevens (1983) suggests an approach on the basis of "expert performance" through dialogue between the teacher and the student. The teachers in inquiry dialogue pursue teaching students particular rules or theories and teaching students how to derive rules or theories. Th teacher must have the ability to know what questions to ask in order to guide the student to derive a new rule or theory on his own. S/he must also be able to help the students evaluate the new rule or theory, and then, to get the students to verbalize and

define their own rules and theories. Collins and Stevens (1983) enumerate several strategies for inquiry teaching which help the students learn the kinds of reasoning skills important in forming hypotheses, making predictions, considering alternative hypotheses, knowing what questions to ask, and learn other skills necessary to help them become successful scientists. "They become involved in the process of creating new theories or recreating theories that have been developed over centuries... The students come out of the experience able to attack novel problems by applying these strategies themselves" (1983, p. 276).

To be a good critical inquirer, a teacher must possess, first and foremost, a strong basis of knowledge for the subject matter. The teacher must know how to direct the situation so that the learners are able to explore problems freely by themselves, to debug and reformulate problems in order to arrive at new results; thus, gaining for themselves, not only the understanding of these new results and experiences, but the understanding of the process through which these new results and experiences have evolved. It takes a high level of expertise to be proficient in the field of critical inquiry, and expertise can only be derived through practice. Educators who are frequently scared or resistant to discovery techniques must have to take a step, for, according to Heron (1981), "Where the human condition is concerned, it is better to be vaguely right than precisely wrong, better to own a fruitful conclusion than mask it with irrelevant precision" (p. 163).

To widen the bases of knowledge in fields of practice, the mastery of question-asking skills derived usually through dialogue must be practiced. Teachers are encouraged to practice formulating questions in their everyday encounter with students. These knowledge and skills are influential in the successful learning and development of critical inquiry among students.

Educators must also take part in the formation and organization of groups with whom interaction and sharing of ideas take place. The main function of such groups lie in the support for or opposition of propositions or ideas; and in making recommendations for future improvement. This is called collaborative inquiry. It is in this area of collaborative inquiry that people grow in knowledge and experience. In stressing the importance of collaborative inquiry, William Torbert (1981, p. 147) asserts that

> "...each actor requires others' best attention and sincere responses in order to learn whether his or her own purposes, theories, actions and effects are mutually congruent. In other words, the aspiring action scientist requires others' friendly collaboration."

Through collaborative inquiry, we close the gap between research and everyday living. Contained herein is the idea of a self-generating culture in which a group of people come together to generate social practices and rituals; thus, giving more meaning to their whole human existence.

Heuristic research:

Finally, the field of heuristic research offers health educators with an approach that encourages discovery, and methods which enable students to take part in their own investigations. Discovery techniques entail taking part in unusual and rare experiments in which the outcomes are not known. The goal is to "discover" for oneself what works best based on the theory that no one situation brings about the same results. The experience of "discovering" a new rule or theory and not the emphasis of results becomes the learning process in itself.

Ultimately, it is in the field of educational research that the application of heuristic strategies relative to personal ideas, beliefs, and values are most critical. In an effort to look at the more humanistic values and approaches to research, Clark Moustakas (1981) relates his experiences in what appeared to be a pursuit of the true meaning of loneliness. Ultimately, this search became the main focus of his formal study. The preset problem began more as a personal quest to find out for himself how he and many others felt about loneliness. Moustakas (1981, p. 208) states,

"The initial journey was an attempt to discover the one true way to proceed; it involved a process of self-inquiry, which was not planned but simply happened, which was not carefully sampled but occurred spontaneously at unexpected times and places..."

He suggested that research can be truly meaningful if researchers became aware of human problems as issues of inquiry, and not only

focus their investigations on problems necessitating scientific bases where principles and theories take the highest levels in their priorities. Moustakas (1981) and many other writers relate that the most genuine researches are those where the subjects of the study are co-researchers contributing to the propositions at all stages from problem-setting to research conclusions. Furthermore, the realization that discovery helps researchers confront reality instead of evade it becomes a worthwhile aspiration as, in the words of Moustakas (1981, p. 211):

"such discovery, while using the experience of our senses as clues, transcends this experience by embracing the vision of a reality beyond the impression of our senses, a vision which speak for itself in guiding us to a deeper understanding of reality..."

METHOD:

The course:

The experiential learning and critical inquiry framework was applied to a basic health education course that was considered to be elective - students opted to take the course. The course was titled Patterns of Healthful Living. The course dealt with contemporary health problems and issues such as alcohol drug use and abuse, stress, human sexuality, consumer health, environmental health, mental health, and chronic diseases. Students were expected to acquire basic knowledge of course content and how these related to their day to day activities. In addition, students were asked to associate these with reality -- how these affected their own lives and the lives of others.

The students:

Students who took the class had varied backgrounds and interests. Since the course was considered and elective, students from varied year levels - freshmen, sophomores, juniors, and seniors who were majoring in different fields of studies were allowed to register in the course. Given the diversity of the sample, it may be assumed that various learning styles are inherent in this group.

Procedure:

In order to assess individual students' learning styles, a total of sixty nine respondents' learning styles were measured using the Kolb's Learning Styles Inventory (Kolb, 1984) during the Spring semester, 1990. The Learning Styles Inventory (LSI) is based on the comparison of two sets of word pairs distributed across four columns (Figure 1), with each pair reflecting one or the other end of one of the continua. The respondent is asked to rank 12 sets of words according to which set best characterizes his or her learning style. A "four" is assigned to the set of words which best describes his or her learning style, while a "one " is assigned to the set of words which is believed to be least characteristic of the respondent as a learner. The responses are then summed in columns so that each column reflects one of the four stages in the experiential learning model. The categorization of the learner is based upon locating the score in the matrix. Subtracting the concrete experience total from the

abstract conceptualization total results in a value on the vertical axis, and subtracting the reflective observation total from active experimentation total results in value on the horizontal axis (See figure 2). The learning styles category is revealed by locating the point of intersection of the two scores in the matrix.

After the questionnaires had been filled out each respondent's learning style was located on the grid, the instructor provided a brief description of the four learning styles. Handouts which provided a more detailed description of the Learning Style Inventory were distributed. The experiential learning model was discussed in depth and a dialogue between the respondents (students) and the teacher was inspired. The dialogue consisted of how each of the respondents may meaningfully learn and experience the course both individually and collectively in relation to the achievement of the goals and objectives of the course. A consensus was formed on the basis that a variety of learning strategies would be used and that students would actively participate in their own learning. Students divided themselves into groups and all topics that the class covered during the semester were assigned and divided among them. Each individual chose a topic that interested him or her and became a member of the group to which that topic was designated. Each group was assigned a class day of presentation. The groups were encouraged to use a variety of teaching techniques in their presentations with the condition that the basic concepts of the

topic were to be covered and explored. The students were also stimulated to use discovery techniques and to include previous as well as new learning experiences which they thought was important and should be shared with the class. Approval by the instructor on the types of presentations to be made was necessary prior to the scheduled date of presentations. The presentations lasted for sixty minutes each class day. The instructor used the next 30 minutes following the presentations for group evaluations both by the instructor and the student observers by rendering feedback and providing the class with other concepts and ideas regarding the assigned topic which were not touched upon by the group. In addition, it was also during this time that the instructor encouraged introspection and reflection on the presentation previously made. Questions in relation to health education were asked, and the groups talked about: their experiences in planning and implementation, the new rules or theories that were derived, and the application of these to their everyday lives.

RESULTS AND ANALYSIS:

A total of sixty nine students were typed for the spring 1990 semester (Figure 4). As noted, 30.45% were assimilators, 26.08% were accommodators, 23.18% were divergers, and 20.29% were convergers. Note that there were more assimilators and accommodators than divergers and convergers in the class, although the numbers among all four groups were almost similarly distributed. The students seem to be dispersed among all four

types of learning styles even though the assimilators consisted of the most number of students. The diversity of students in the class may warrant this distribution as students from varying levels as well as departmental majors registered for this class.

Figure 4. Distribution of students on the four types of learning styles:

Learning Style	Number	Percentage
Accommodators	18	26.08%
Divergers	16	23.18%
Convergers	14	20.29%
Assimilators	21	30.45%
Total	69	100%

Consistently, it may be assumed that students had different age levels, maturity rates, learning experiences, and have come from a variety of learning environments, cultures and backgrounds.

The students appreciated knowing their own learning styles and were challenged to adapt to other styles of learning than their own. The group idea fostered this kind of atmosphere -- where students became challenged to adapt to other members of the group's learning styles and came to a consensus on a specific

proposal. In the end, the rewards seemed to have outweighed the benefits. One student said, "Although I did not agree with the other members' decision on how to go about our presentation, all in all the experience was good. I learned a lot and I did not know that I have enjoyed so much from this experience until it (the presentation) was over. What I thought was a difficult presentation did not end up so because the challenge of doing it and being successful afterwards was all worth it." Not only did this student feel a sense of accomplishment but also realized that success may also be gained in trying out new experiences and adapting to other learning styles.

Most of the presentations were substantial, interesting, and fun. The groups planned their presentations well for the most part and used creativity in many instances. This was sensed in the variety of teaching and learning techniques that were used by the groups in their presentations. Students did role-plays, group discussions, games, case studies, and critical incident reports. They used a variety of instructional media such as films, videotapes, slides, computer software, and transparencies. They invited lecturers, guest speakers, and other departmental professors to talk to the class. Every presentation was a surprise, and indeed always turned out unique; students in the class were anxious and excited to know what each group was doing and what was going to happen that day.

Many of the groups' presentations followed Kolb's model pretty well. A topic was assigned to the students for

presentation. A brief summary of each topic was done in lecture format (reflective observation) before the presentations were made. The students divided themselves into groups and planned their presentations (abstract conceptualization). Then students did their presentations (active experimentation) which were accompanied or followed by the students' evaluations (concrete experience) by talking about their observations and the different experiences they encountered during the presentations.

Additionally, the area of critical inquiry was also encouraged. The students were stimulated to ask not only "what" questions but also those concerning the "how to's" and the "why's." The students engaged in dialogue on issues and problems that affected health and their everyday lives. For example, on the topic of human sexuality, students engaged in fruitful discussions on homosexuality and abortion. They were provided with different sides of the issue and were pursued to make their own informed decisions on what they would do if they were confronted with such problems. Not only were homosexuality and abortion discussed but also how these affected the individual, the society and the world. In using discovery techniques, they were guided to formulate theories on their own. For example, the question, "If you were unable to decide which theory you think would work out to help you make your own decision, are there other ways you could think of that would work best for you?" was constantly and continuously asked when a state of ambivalence was sensed in some students.

Many students think that since health is a practical course, this was going to be easy for them. They claimed to have much knowledge about content. Some stated, however, that they do not remember how to handle unusual situations if they were confronted with them; they do not really appreciate what the term health actually implies, and they do not understand how it affects them and society as a whole. The answers may be plain but they are nearly meaningless to many students. The problem exists not in the knowledge of content but from the whole experience in which the content was learned. This was the whole goal of the project - to get students to become involved in the whole educational process.

CONCLUSIONS AND RECOMMENDATIONS:

The results of this project suggest that students actually possess different learning styles and when teachers were aware of these differences, they could create various types of classroom environments that catered to these preferred styles of learning. Although some students may rely on and develop skills suitable to a particular style of learning, as one interacts with a variety of environments, one accepts and adapts to these environments as a way of coping with a complex and multifaceted world.

Kolb's theory of learning style can be applied to a variety of courses to stimulate self-discovery and interaction with others, and to help students find their learning strengths and weaknesses. It also encourages students to make conscious efforts

to develop new talents for learning. Kolb's model assisted students in this class to enhance their learning experiences by offering a discussion of the learning processes which took place during the lectures and presentations. The students repeatedly reported an increased sense of self-esteem and self understanding when their presentations were completed and had been successful.

The application of learning styles in teaching and research is poses several implications for health education. Information on learning styles can be useful for teachers in the planning, implementation, and evaluation of courses, in the application of content to out-of-school environments, and in challenging their students to new heights of development. It is recommended that faculty members must use all types of learning modes in classroom activities so that students will systematically get involved in them while learning content at the same time (Murrell, and Claxton, 1987). Murrell and Claxton (1987) further added that when activities are responsive to all four learning styles, the activities progress around the circle, and "all students get the chance to 'shine' 25 percent of the time." Further, Kolb's theory can be used in the design of examinations where students are stimulated to think in divergent, assimilative, convergent, and accommodative ways. If all four learning modes are used student retention in learning is increased to ninety percent (Stice, 1987).

This study implies that the assessment of learning styles among students is an easy task; however, the creation of

classroom environments that accommodate these learning styles is a challenge that requires mastery of skills, a well-rounded knowledge, hard work, patience, perseverance, and creativity. To do this, the teacher has to be prepared in this task -- to seek new information, and to acquire the necessary experience to be successful in the application of this framework in the courses to be taught.

In the context of quantitative research, the learning styles instrument is more appropriate as a means of collecting aggregate data on student styles than as a means of understanding behaviors. However, as Murrell and Claxton (1987) suggested, that when the instrument is used for dialogic, rather than diagnostic, purposes, it is extremely useful (p. 33).

This project which integrates experiential learning and critical inquiry to health education adds weight to the idea that the design of teaching activities that match students' preferred styles of learning can enhance teaching effectiveness and increased knowledge and participation on the part of the students. Murrell and Claxton (1987) stated that this can be done in several ways. First, when data on students' learning styles are gathered, a teacher will be able to identify those who will not do well in courses that required a particular learning style. In knowing this, increased guidance and direction on the part of the teacher to that student is necessary. In addition, teachers are encouraged to consider the use a variety of sources and utilize a comprehensive approach in their classes. Further,

information about learning styles has the advantage of being relatively nontechnical and esoteric, and it is of greater practical value to teachers "whose major expertise is in their discipline, not in research methodology" (p. 54).

Second, because teachers find it helpful to understand the ways in which their students learn and how to tailor their instruction to meet these processes, it may be that the long-term impact of Kolb's framework is the increase in self-achievement and self-confidence that comes about when faculty and students engage in dialogue about teaching and learning experiences.

Third, when the status of student learning styles serves as a basis for updating courses and continued faculty development, learning style is very important as an effort to promote student success.

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Name _____

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Inventory

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Learning-Style Inventory: Instructions

The Learning-Style Inventory describes the way you learn and how you deal with ideas and day-to-day situations in your life. Below are 12 sentences with a choice of four endings. Rank the endings for each sentence according to how well you think each one fits with how *you* would go about learning something. Try to recall some recent situations where you had to learn something new, perhaps in your job. Then, using the spaces provided, rank a "4" for the sentence ending that describes how you learn *best*, down to a "1" for the sentence ending that seems *least* like the way you would learn. Be sure to rank all the endings for each sentence unit. Please do not make ties.

Example of completed sentence set:

0. When I learn:	4 I am happy.	1 I am fast.	2 I am logical.	3 I am careful.

1. When I learn:	____ I like to deal with my feelings.	____ I like to watch and listen.	____ I like to think about ideas.	____ I like to be doing things.
2. I learn best when:	____ I trust my hunches and feelings.	____ I listen and watch carefully.	____ I rely on logical thinking.	____ I work hard to get things done.
3. When I am learning:	____ I have strong feelings and reactions.	____ I am quiet and reserved.	____ I tend to reason things out.	____ I am responsible about things.
4. I learn by:	____ feeling.	____ watching.	____ thinking.	____ doing.
5. When I learn:	____ I am open to new experiences.	____ I look at all sides of issues.	____ I like to analyze things, break them down into their parts.	____ I like to try things out.
6. When I am learning:	____ I am an intuitive person.	____ I am an observing person.	____ I am a logical person.	____ I am an active person.
7. I learn best from:	____ personal relationships.	____ observation.	____ rational theories.	____ a chance to try out and practice.
8. When I learn:	____ I feel personally involved in things.	____ I take my time before acting.	____ I like ideas and theories.	____ I like to see results from my work.
9. I learn best when:	____ I rely on my feelings.	____ I rely on my observations.	____ I rely on my ideas.	____ I can try things out for myself.
10. When I am learning:	____ I am an accepting person.	____ I am a reserved person.	____ I am a rational person.	____ I am a responsible person.
11. When I learn:	____ I get involved.	____ I like to observe.	____ I evaluate things.	____ I like to be active.
12. I learn best when:	____ I am receptive and open-minded.	____ I am careful.	____ I analyze ideas.	____ I am practical.

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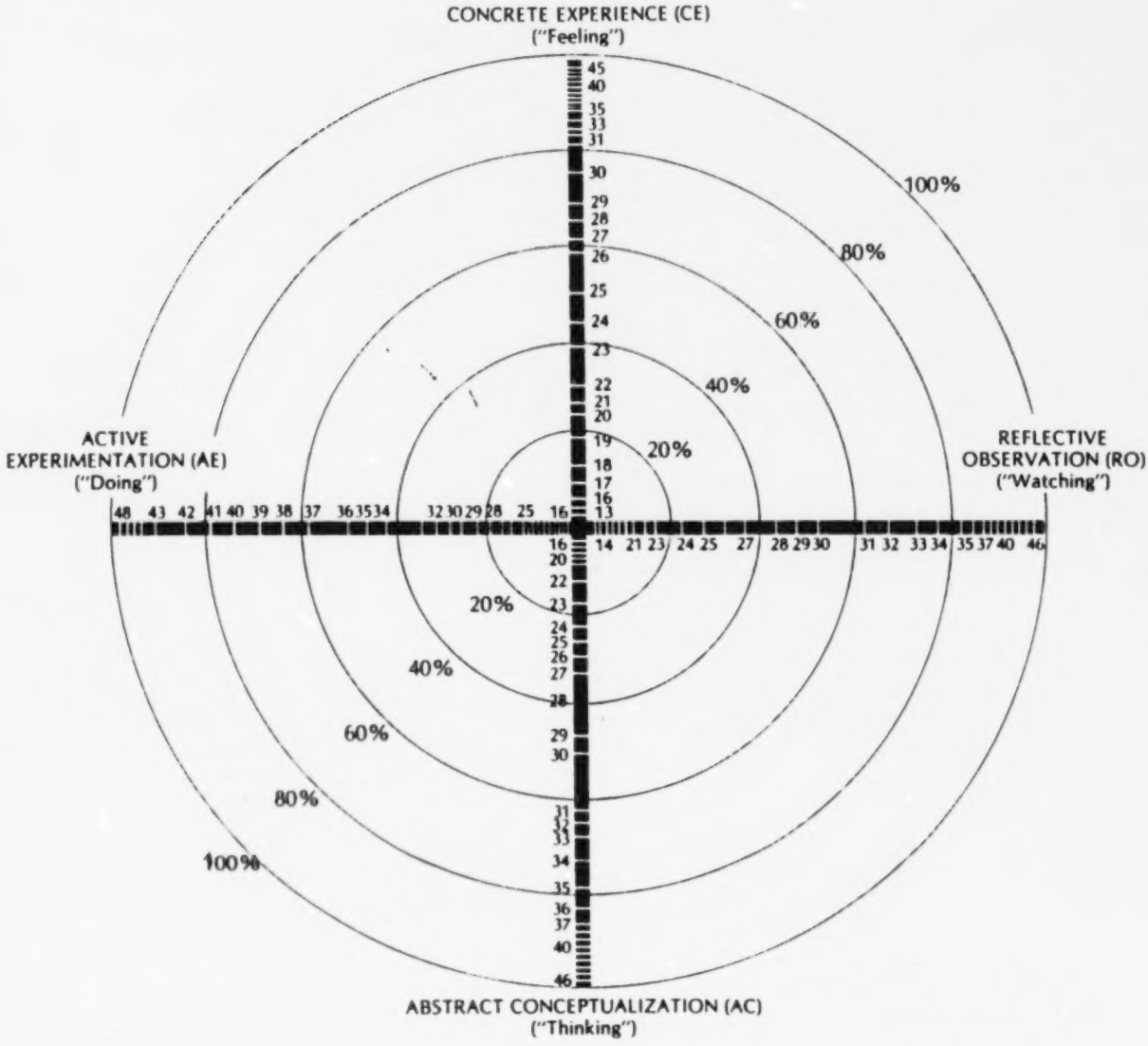
The Cycle of Learning



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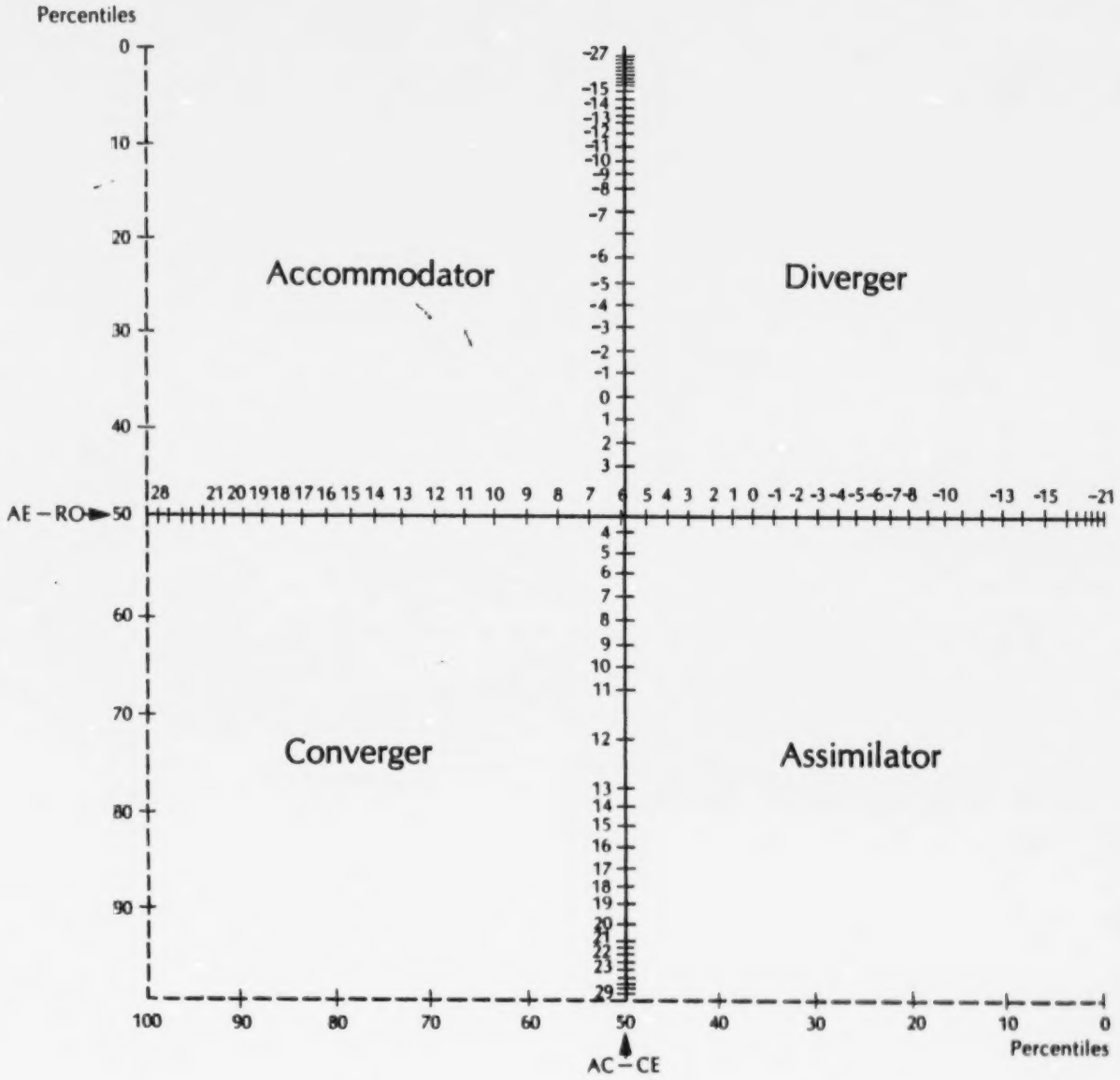
Learning-Style Type Grid



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